Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

NOTE ON SYMBOLS.

By PROF. A. HALL, Washington, D. C.

I am glad that Professor Oliver has undertaken the discussion of mathematical notation, and I wish to call attention to the need of something being done in a negative direction.

(α). In the case of the inverse trigonometric functions our text books universally use the illogical expressions $\sin^{-1}x$, $\cos^{-1}x$, etc. This notation has the sanction of long usage in England and in this country, but it would be much better, I think, to follow the example of French authors and write arc sin x, arc cos x, etc.

(β). In writing the differential coefficient of a function our text books show a confusing variety of notation. We have the notation of Leibnitz, $\frac{du}{dx}$; the Newtonian symbol $\dot{u}$; and the complex symbol $D_x u$. Of these it seems to me that the first is the most expressive and the best, and it is generally adopted by European mathematicians. The confusion is increased by the use of the capital D to denote sometimes a partial and sometimes a complete derivative. The partial derivative is now well expressed after the manner of Jacobi by $\frac{\partial u}{\partial x}$.

(γ). In a special memoir an author can of course use such notation as he pleases, but text books should be designed to give the student clear and firm ideas of the principles and symbols he uses. For a beginner the chief difficulty in the application of mathematics does not lie in the solution of algebraic and differential equations, nor in integration, since in many cases this part of the work is much like taking a logarithm from the tables; but the most serious part of the work lies in the correct expression of ideas and in the formation of the right equations. For these reasons it seems to me that authors of text books should endeavor to select the simplest and most expressive notation. And it is for reasons like these that I think the method of infinitesimals will never be dispensed with, since it is so closely connected with geometrical conceptions.

We have the statement of one of the most eminent of living mathematicians, who began life as a lawyer, that while the law seems designed to confuse and complicate matters, the end of mathematics is to make things plain. I hope our mathematical writers will give heed to this opinion.